



Nutrition for Patients with Cancer

Benefits of Good Nutrition

Good nutrition is especially important for people with cancer. That is because the illness itself, as well as its treatments, may affect your appetite. Cancer and cancer treatments may also alter your body's ability to tolerate certain foods and to use nutrients.

The nutrient needs of a cancer patient vary from person to person. Your doctor, nurses, and dietitians can help you identify your nutrition goals and plan strategies to help you meet them. Eating well while undergoing cancer therapy can help you to:

- Feel better
- Keep up your strength and energy
- Keep up your weight and your body's store of nutrients
- Tolerate treatment-related side effects
- Decrease your risk of infection
- Heal and recover quickly

Eating well means eating a variety of foods that provide the nutrients you need to maintain your health while fighting cancer. These nutrients include protein, carbohydrates, fat, water, vitamins, and minerals.

Nutrients

Protein: Protein helps to ensure growth, to repair body tissue, and to maintain a healthy immune system. Without enough protein, the body takes longer to recover from illness and lowers resistance to infection. As such, people with cancer often need more protein than usual. Following surgery, chemotherapy, and radiation therapy, additional protein is usually needed to heal tissues and to help prevent infection. Good sources of protein include lean meat, fish, poultry, dairy products, nuts, dried beans, peas and lentils, and soy foods.

Carbohydrates and fats: Carbohydrates and fats supply the body with the bulk of the calories it needs. The amount of calories each person needs depends on his or her age, size, and level of physical activity. Sources of carbohydrates include fruits, vegetables, breads, pasta, grains and cereal products, dried beans, peas, and lentils. Sources of fat include butter, margarine, oils, nuts, seeds, and the fat in meats, fish, and poultry.

Vitamins and minerals: Vitamins and minerals help ensure proper growth and development. In addition, they allow the body to use the energy (calories) supplied in foods. A person who eats a balanced diet with enough calories and protein usually gets plenty of vitamins and minerals. However, eating a balanced diet can be challenging when you are receiving cancer treatment, particularly if treatment side effects persist for long periods of time. When that is the case, your doctor or dietitian may recommend a daily multivitamin and mineral supplement.

Water: Water and fluids are vital to health. If you do not take in enough fluids or if you are vomiting or have diarrhea, you may become dehydrated. Ask your doctor or nurse how much fluid you need each day to prevent dehydration.

You can use the American Cancer Society Guidelines for Nutrition for Cancer Prevention below to help you plan what to eat each day. The guidelines serve as a general guide for healthy people that lets you choose a healthful diet. People with cancer, however, may have increased nutritional needs. For example, your doctor or dietitian may suggest increasing the number of servings of specific types of food.

- Eat five or more servings of a variety of vegetables and fruits each day.
- Choose whole grains in preference to processed (refined) grains and sugars.
- Limit consumption of red meats, especially those high in fat and processed.
- Choose foods that help you maintain a healthful weight.

What to Do Before Treatment Begins

When you are healthy, eating enough food to get the nutrients you need is usually not a problem. In fact, most nutrition guidelines stress eating lots of fruits, vegetables, and whole-grain products; consuming a moderate amount of low-fat meat and dairy foods; and cutting back on fat, sugar, alcohol, and salt.

During cancer treatment, however, this may become a challenge, especially if you experience side effects or simply don't feel well. As a result, your diet may need to be changed to help you build up strength and withstand the effects of your cancer and its treatment.

Nutrition suggestions for people with cancer often emphasize eating lots of *high-calorie, high-protein* foods that increase protein such as milk, cheese, and cooked eggs. If you experience weight loss, you may also be advised to eat more sauces and gravies and to include more butter, margarine, or oil in your foods to boost calories. In addition, you may be encouraged to eat fewer *high-fiber* foods, because fiber can aggravate problems such as diarrhea.

When your cancer was first diagnosed, your doctor talked with you about a treatment plan. This may have involved surgery, radiation therapy, chemotherapy, hormone therapy, biologic therapy (immunotherapy), or some combination of treatments.

All of these treatments kill cancer cells. But in the process, some healthy cells also become damaged. That is what causes the side effects of cancer treatment. The following side effects can affect your ability to eat:

- Loss of appetite (anorexia)
- Weight loss or gain
- Sore mouth or throat
- Dry mouth
- Dental and gum problems
- Changes in taste or smell
- Nausea
- Vomiting
- Diarrhea
- Constipation
- Fatigue
- Depression

You may or may not have any of these side effects. Many factors determine whether you will have any and how severe they will be. These factors include the type of cancer, the part of the body affected, the type and length of treatment, and the dose of treatment. Most side effects can be controlled and most go away after treatment ends. Talk to your doctor or nurse about your chances of having side effects and what they might be like.

Ways to Obtain the Nutrients You Need

If you have cancer, you need to obtain enough nutrients to meet the following goals:

- Prevent or reverse nutritional deficiencies
- Minimize side effects of cancer and its treatment
- Maximize your quality of life

By Mouth

If at all possible, try to meet your nutrient needs by eating and drinking nutritious foods and beverages. You may be able to obtain enough nutrients by eating high-calorie, high-protein meals supplemented with snacks, commercial liquid nutrition products, and homemade drinks and shakes. If that proves to be too difficult, or if your calorie and nutrient needs have greatly increased, you may need to use a feeding tube.

By Feeding Tube

For tube feeding, a thin, flexible tube is placed through the nose and into the stomach. Once the tube is in place, liquid nutrition formulas can be given through it. If needed, such formulas can provide 100 % of your needs for calories, protein, vitamins and minerals. People who have feeding tubes can usually continue to eat by mouth. This is because the tubes are so small that they do not interfere with swallowing.

If you need a feeding tube, every effort will be made to enable you to eat by mouth. For example, you may be tube fed at night while you sleep to allow you to eat during the day. Once tube feedings begin you will usually feel better because your nutrition needs are being met. Most people get used to tube feedings within a few days. Some people need longer to adjust. It often helps to talk with someone who has also had a feeding tube.

Tube feedings are most often used to boost weight in people with a poor appetite. They may also be used in people who cannot eat or drink. In these people, the feeding tube can be inserted every night. Most people prefer that it be left in place.

A more permanent type of tube can be surgically placed directly into the stomach (gastrostomy) or the intestines (jejunostomy) through the skin. These procedures can usually be done as an outpatient. Tube feedings can be taken at home, if needed, with the help of family, friends, or caregivers.

By Total Parenteral Nutrition

Tube feedings may provide needed fluids and nutrients in people with serious digestive problems. In these cases, nutrient solutions can be given directly through a vein. This type of therapy is called *intravenous hyperalimentation* or *total parenteral nutrition (TPN)*. TPN is most often used when someone has had surgery of the digestive system; when there is a complete blockage of the intestine; when severe vomiting or diarrhea occur; or when complications from cancer or treatment prevent eating or using a feeding tube. Like tube feedings, TPN can be given at home.

Preparing Yourself for Cancer Treatment

Until you begin treatment, you won't know exactly what, if any, side effects you may have or how they feel. One way to prepare for them is to think of your treatment as a time to concentrate on yourself and on getting well. Here are some ways to get ready:

Think Positively

- You can reduce your anxiety about treatment side effects by having a positive attitude, talking about your feelings, and becoming well-informed about your cancer and treatment. In addition, planning ways to cope with possible side effects can make you feel more in control and help you keep your appetite.
- Many people have few or no side effects that keep them from eating. Even if you have side effects, they may be mild and most go away after cancer treatment ends. In addition, you may be able to control side effects with new drugs that are available.

A Healthy Diet

- A healthy diet is vital for a person's body to function at its best. This is even more important for people with cancer.
- If you eat a healthy diet you'll go into treatment with reserves to help keep up your strength, prevent body tissue from breaking down, re-build tissue, and maintain your defenses against infection.
- People who eat well are better able to cope with side effects of treatment. And, you may even be able to handle higher doses of certain drugs. In fact, some cancer treatments are more effective in people who are well-nourished and are getting enough calories and protein.
- Don't be afraid to try new foods. Some things you may never have liked before may taste good to you during treatment.

Plan Ahead

- Stock the pantry and freezer with your favorite foods so that you won't need to shop as often. Include foods you know you can eat even when you are sick.
- Cook in advance and freeze foods in meal-sized portions.
- Talk to your friends or family members about helping with shopping and cooking, or ask a friend or family member to take over those jobs for you.
- You can also talk to your doctor, nurse, or a registered dietitian about any concerns you have about eating well. She or he can help you plan meals and develop a grocery list in case you have side effects such as constipation or nausea.

Nutritious Snacks

During cancer treatment your body often needs extra calories and protein to help you maintain your weight and recover and heal as quickly as possible. Nutritious snacks can help you meet those needs, maintain your strength and energy level, and enhance your feeling of well-being. To make it easier to add snacks to your daily routine, consider the following:

- Try to eat small, nutritious snacks throughout the day.
- Try to keep a variety of protein-rich snacks on hand that are easy to prepare and eat. These include yogurt, cereal and milk, half a sandwich, a bowl of hearty soup, and cheese and crackers.

- Avoid snacks that may make any treatment-related side effects worse. If you suffer from diarrhea, for example, avoid popcorn and raw fruits and vegetables. If you have a sore throat, avoid dry, coarse snacks and acidic foods.

Examples of Nutritious Snacks		
Angel food cake	Gelatin	Popcorn, pretzels
Bread	Granola	Puddings, custards
Cereal -- hot or cold	Homemade milkshakes and drinks	Sandwiches
Cheese	Ice cream	Sherbet
Cookies	Juices	Soups -- broth-based or hearty
Crackers	Milk	Sports drinks
Dips made with cheese, beans, and yogurt	Muffins	Vegetables -- raw, cooked
Eggnog (pasteurized)	Nuts	Yogurt -- carton, frozen
Fruit -- fresh, canned, dried	Peanut butter	

High-Calorie, High-Protein Shake and Drink Recipes

For the following recipes, follow these basic instructions:

- Place all ingredients in a blender container or prepare in a large container with a hand-held blender.
- Cover and blend on high speed until well blended.
- Chill drinks before serving.
- Store unused drinks in the refrigerator or freezer.
- Add 1 to 2 tablespoons of powdered milk to each recipe to increase protein content.

Note: If you cannot tolerate milk or milk products or if you have diabetes, ask your health care professional for appropriate recipe ideas.

Fortified Milk

Drink or use in cooking to add protein.

1 quart whole milk

1 cup nonfat dry milk

Blend and chill at least 6 hours. Can also be made with buttermilk and dry buttermilk.

(211 calories and 14 grams of protein per cup).

Sherbet Shake

A refreshing shake

1 cup sherbet

1/2 cup whole milk

1/2 teaspoon vanilla extract

(422 calories and 6 grams of protein per serving)

Cottage Cheese Smoothie

A thick, protein-packed drink

1/3 cup cottage cheese

1/2 cup vanilla ice cream

1/4 cup prepared fruit flavored gelatin

(310 calories and 11 grams of protein per serving)

Classic Instant Breakfast Milkshake

A protein-packed favorite

1/2 cup whole milk

1 envelope instant breakfast mix

1 cup vanilla ice cream (add flavorings and different flavor ice creams for variety)

(474 calories and 20 grams of protein per serving)

Peach Yogurt Frost

A frosty, tangy drink

1 envelope vanilla instant breakfast mix

1 cup whole milk

1/2 cup peach yogurt

6 to 10 crushed ice cubes

(400 calories and 19 grams of protein per serving)

Chocolate Cocoa Drink

A cool, creamy chocolate drink

1 1/4 cup vanilla ice cream

1/2 cup whole milk

1 package of hot chocolate mix

2 teaspoon Sugar

(600 calories and 24 grams of protein per serving)

Homemade Soup Recipes

Winter Soup

2 tablespoons vegetable oil

1 medium onion, chopped

2 14 1/2-ounce cans fat-free chicken broth, either homemade or canned

3/4 cup tomato sauce

1/2 cup macaroni, uncooked

1 15-ounce can white beans (cannelloni or Great Northern beans), drained

Pepper to taste

Heat oil in a large soup pot over medium low heat. Add onions and cook for 3 minutes. Add broth and tomato sauce, bring to a boil, then stir in macaroni. Reduce heat, cover and simmer for 10 minutes.

Add pepper to taste, then stir in white beans. Heat mixture thoroughly. Serve in soup bowls with croutons, cornbread, crackers, or a sprinkle of Parmesan cheese. Makes 4 to 6 servings.

Approximate nutrients per serving: 295 calories, 8 grams of fat

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Turkey Vegetable Soup

1 teaspoon vegetable oil

1 pound 93%-lean ground turkey

1 cup onion, diced

1 large clove garlic, minced

2 cups water

1 1/2 cups potato, peeled and diced

1/2 cup carrots, peeled and chopped

2 15-ounce cans tomatoes (no salt added)

1 10-ounce package frozen mixed vegetables

1 teaspoon chili powder

1/2 teaspoon each oregano and marjoram In a large pot over low heat, sautee the turkey, onion, and garlic in oil. Drain fat. Add water and potatoes and bring to a boil. Cook 10 minutes. Add carrots and

tomatoes and cook 10 minutes more. Add mixed vegetables and spices, cover, and simmer for 15 minutes. Makes 8 1 1/2 cup servings.

Approximate nutrients per serving: 190 calories, 21 grams of protein

Gazpacho

2 cans tomato soup

2 cans water

1 tablespoon olive oil

1 teaspoon salt

Dash hot sauce

Dash garlic powder

1 small onion, chopped

1 cucumber, peeled, seeded, and chopped

1 green pepper, seeded, and chopped

1 large can or 2 fresh tomatoes, peeled, seeded, and chopped

Mix together first 6 ingredients, then add remaining 4. Chill and serve with chips or crackers. Can blend in blender to make a pureed soup. Makes 8 1-cup servings.

Approximate nutrients per serving: 90 calories, 2 grams protein, 3 grams fiber.

Cream of Broccoli Soup

3 cups broccoli florets and peeled stems, finely chopped

1 1/2 cups water

1 tablespoon corn oil or margarine

1/2 cup onion, chopped

1 tablespoon all-purpose flour

3 cups 1%-fat milk

1/2 teaspoon salt (optional)

1/2 teaspoon pepper

1/4 teaspoon paprika

1/4 teaspoon celery seed

1/8 teaspoon cayenne pepper

Combine broccoli and water in a 3-quart saucepan and bring to a boil. Lower heat, cover, and simmer for 10 minutes. Drain, saving liquid. Melt corn oil or margarine in a larger saucepan over low heat and add onion and saut, until soft. Add flour and continue to cook for several seconds, stirring constantly.

Stir in reserved liquid and cook until thickened. Add milk, broccoli, salt, black pepper, paprika, celery seed and cayenne pepper, mixing well. Heat to serving temperature over low heat. Makes 6 servings.

Approximate nutrients per serving: 101 calories, 3 grams of fat

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Potato Soup

3 medium potatoes, peeled and cubed

2 cups reduced-sodium chicken broth

2 stalks chopped celery

1/2 small onion, peeled

1 tablespoon margarine

1 tablespoon flour

2 cups milk

2 eggs, hard cooked, peeled, and chopped

Salt and pepper to taste

Cook the potatoes in chicken broth with celery and onion until the potatoes are tender. Blend the mixture in a blender or processor. In a heavy saucepan over low heat, melt the margarine and stir in flour to make a paste. Slowly add the milk, stirring or whisking continuously until the mixture is thoroughly blended and heated through. Add the pureed potato mixture. Add chopped eggs that have

been pushed through a sieve. Mix well and season with salt and pepper as desired. Serve hot or cold. (This soup thickens when chilled and may need to be thinned with additional chicken broth or milk.)

Makes 4 serving.

Approximate nutrients per serving: 240 calories, 12 grams protein when prepared with reduced-fat milk.

Nutrition After Treatment Ends

Most eating-related side effects of cancer treatments go away after the treatment ends. Sometimes, however, side effects such as poor appetite, dry mouth, change in taste or smell, difficulty swallowing, or significant weight loss may persist. If this happens to you, talk to your health care team and work out a plan together to address the problem.

As you begin to feel better, you may have questions about eating a healthful diet. Just as you wanted to go into treatment with the necessary nutrient stores that your diet could give you, you'll want to do the best for yourself at this important time. There's no research that suggests that the foods you eat will prevent your cancer from recurring. But, eating well will help you regain your strength, rebuild tissue, and feel better overall.

Suggestions For Healthy Eating After Cancer:

- Check with your doctor for any food or diet restrictions.
- Ask your dietitian to help you create a nutritious, balanced eating plan.
- Choose a variety of foods from all the food groups. Use the American Cancer Society Guidelines for Nutrition for Cancer Prevention to help choose foods for a well-balanced meal plan.
- Try to eat at least five to seven servings a day of fruits and vegetables, including citrus fruits and dark-green and deep-yellow vegetables.
- Eat plenty of high-fiber foods, such as whole grain breads and cereals.
- Buy a new fruit, vegetable, low-fat food, or wholegrain product each time you shop for groceries.
- Decrease the amount of fat in your meals by baking or broiling foods.
- Choose low-fat milk and dairy products.
- Avoid salt-cured, smoked, and pickled foods.
- Drink alcohol only occasionally if you choose to drink.
- If you are overweight, consider losing weight by reducing the amount of fat in your diet and increasing your activity. Choose activities that you enjoy. Check with your doctor before starting any exercise program.

Frequently Asked Questions About Nutrition and Physical Activity

Are there foods that will help with dry mouth and swallowing problems?

Sugarless gum, especially those that are citrus flavored, can increase saliva formation. Keep a water bottle nearby and take sips often throughout the day. Mouth sprays and saliva substitutes can also help. Choose foods high in moisture, or add sauces, gravies, or oils. High-calorie shakes and blenderized drinks can also help. Canned nutritional supplement drinks and other high calorie shakes can be useful. Any food can be pureed, mashed, blended, or mixed to be softer and easier to swallow. Drink liquids together with small bites of solid foods. Moist and soft foods such as eggs, custards, yogurt, cottage cheese, fruits, soft-cooked vegetables, and soft meats, are usually easier to swallow.

Are there foods that will help with my loss of appetite and nausea?

Loss of appetite and nausea are common symptoms during and after cancer treatment. Your sense of taste can change during treatment. Using more spices and condiments might help to increase food appeal. Try spices and flavorings often, as your tastes may have changed. Sometimes medicines can be very helpful to reduce nausea. There are also medicines that can help to increase appetite. Ask your doctor or nurse if those might be good for you.

Can I reduce my fatigue with nutrition?

Nutrition and physical activity can help reduce fatigue. Patients and survivors have fatigue for a number of different reasons. Some fatigue may occur because they do not eat enough or do not exercise enough. Starting slowly with an exercise program, even if only for a few minutes a day, can help to restore energy. You can then increase how often and how long you exercise. Some fatigue is due to specific medical problems like anemia, which also can be treated. Talk to your doctor about the reason for your fatigue.

Is there a diet to help improve anemia?

Anemia can occur during cancer treatment and sometimes after treatment as well. It can result from blood loss, chemotherapy, and/or radiation therapy, or from the cancer itself. A balanced diet can help support the body's repair system that will produce new blood cells, but diet alone may not correct the anemia caused by cancer treatment. Iron supplements should be taken only after talking with your doctor. Extra iron is useful if the anemia is caused by too little iron, but there are other causes of anemia. Iron is not helpful for other conditions, and it can cause digestive system side effects, such as constipation and nausea. Good food sources of iron include meats, leafy greens, and fortified grain products. Consuming sources of vitamin C (such as oranges, strawberries, and peppers) with fortified grain products will help you better absorb the iron in those foods. There are several causes of anemia in cancer survivors, and some of these are best treated with medicines or blood transfusions. Talk to your doctor about the cause of your anemia.

Should I be concerned about weight loss?

Weight loss often occurs in the early stages of cancer treatment and recovery, but this is not a good time to lose weight. To keep from losing too much weight, focus on eating more and using less energy. Try between-meal snacks of foods and beverages that are good sources of calories, fat, and protein. While physical activity may be useful in helping to reduce stress and increase strength, high levels of activity make weight gain more difficult.

Should I be concerned about weight gain?

In the short term, during some cancer treatment, weight gain can't be avoided. After treatment, a program of regular physical activity and healthy food choices can usually stop the pattern of weight gain and lead to slow, controlled weight loss. Maintaining a healthy body weight should be a long-term goal to help reduce the risk of new or recurrent cancers, heart disease, and diabetes.

Should I try to lose weight?

After the treatment phase, survivors who are overweight can benefit from modest, slow weight loss of up to 2 pounds per week. There are real benefits from stopping weight gain and beginning weight loss, even if that process is slow. If you are overweight, it is likely that any amount of weight loss will be helpful, even if you do not reach your ideal weight. The best way to lose weight is through a healthy, well-balanced diet and moderate physical activity.

What is a good way to protect my bone strength?

A woman's bones often lose some of their calcium and become weaker (osteoporosis) after menopause, whether it is a natural menopause or one that has been caused by cancer treatment. Estrogens can increase bone strength, but they are not recommended for women who are at high risk for breast cancer, and their safety in women who have had estrogen-responsive breast or endometrial cancers is uncertain. Soy-based foods and supplements and other sources of phytoestrogens have been suggested as a substitute for estrogen, but it is also unknown whether these products are safe for women who are at risk for or survivors of breast or endometrial cancer.

A man's bones may become less dense as he ages. Thinning of bones is also a side effect of hormonal treatment for prostate cancer.

Increasing calcium and vitamin D (from foods and supplements), prescription medicines (such as bisphosphonates), and exercise can be effective for women and men with osteoporosis. Bone density can be easily measured to determine the need for treatment.

What is a good way to control symptoms of menopause?

Estrogens can reduce menopausal symptoms, but estrogen therapy may not be a good choice for women who:

- have had estrogen-responsive breast cancer or endometrial cancer
- are at high risk for breast cancer
- have had complications that can be worsened by estrogens, such as blood clots.

If hormone replacement therapy is a consideration, most doctors now recommend that it should be used only for a short time to relieve symptoms. They discourage most women from long-term hormone replacement. Other methods of controlling menopausal symptoms include regular exercise, healthy eating, avoiding caffeine, reducing alcohol use, stress reduction, and non-hormone prescription medicines. Many dietary supplements taken to manage symptoms of menopause contain estrogens, so you should talk to your doctor before using them.

Can changes in diet and physical activity help with lymphedema?

Lymphedema is swelling in the arm or leg following cancer surgery or radiation. It is caused by a blockage of flow of the lymph fluid. Although a high protein, low sodium diet has been suggested by

some, there is no evidence that this approach helps. Exercise, specifically range-of-motion exercises, may be helpful. Ask your doctor or nurse about specific physical or massage therapy programs designed to treat lymphedema.

Questions about physical activity

Is regular exercise useful after a diagnosis of cancer?

Moderate exercise reduces fatigue, promotes a sense of well-being, and can speed recovery from cancer. It is not known whether exercise will reduce the chances of cancer recurrence or will slow cancer growth. The benefits of regular exercise for weight control and cardiovascular health also make regular, moderate physical activity a good choice for cancer patients and survivors.

Are there reasons why I should not exercise?

There may be special precautions you should consider, depending on your treatment or side effects of treatment. For example, if you have severe anemia, you should delay exercise until the anemia has improved. If you are having radiation treatment, you should avoid swimming pools, because chlorine in pool water can be irritating to irradiated skin. If your immune system has been affected by your cancer treatment, you should avoid public gyms (and other public places) until your white blood cell counts return to normal. You should always consult your doctor or nurse before beginning an exercise program.

How do I select an exercise program that is right for me?

The right exercise program is one that starts slowly, and gradually increases in time and intensity as you are able. Your muscles will tell you when you need to slow down and rest. Strength, flexibility, and aerobic fitness are all important features of an effective exercise program.

Questions about dietary supplements

Should I use vitamin and mineral supplements?

The best source of vitamins and minerals is foods. During and just after cancer treatment, you may not eat everything your body needs, so a vitamin and mineral supplement may be needed. The best choice is a balanced multivitamin/mineral supplement containing as much as 100% of the “Daily Value” of most nutrients (formerly known as the “RDA”). Some people believe that if a little bit of a nutrient is good for you, then a lot must be better. This is not true. In fact, high doses of some nutrients can be harmful. Doctors may prescribe a vitamin and/or mineral supplement for people with certain health problems such as osteoporosis, anemia, or during pregnancy. Be sure to discuss vitamin and mineral supplement use with your doctor.

Can I get the nutrients in fruits and vegetables in a pill?

No. More than 100 healthful compounds are found in fruits and vegetables. The small amount of dried powder contained in the pills that are sold provide only a small fraction of the substances found in whole foods. Many of the benefits of vegetables and fruits are from the combined effect of several of the nutrients they contain and therefore cannot be duplicated in supplements. And, some of the helpful small nutrients (called micronutrients) in plant-based foods are not available as supplements because they have yet to be discovered.

Should I take antioxidants?

It is not a good idea to take large doses, or “mega-doses”, of any vitamin or mineral, including the antioxidant nutrients, at any time. High doses of antioxidants may interfere with cancer treatments such as chemotherapy and radiation therapy. So be sure to discuss your use of supplements with your doctor. Fruits and vegetables are the best source for antioxidants.

Should I take supplements containing beta-carotene?

Supplements containing 5 mg or less of beta-carotene are not likely to be harmful because this is similar to the levels found in foods. Higher dose supplements should not be taken because higher doses may actually increase risk for certain cancers such as lung cancer, especially if you smoke.

Should I take soy supplements?

Although soy foods such as tofu are a good source of protein, taking large amounts of soy protein, as found in most soy pills or powders, could have effects on cancer risk that are not yet certain. Phytoestrogens and other plant chemicals (phytochemicals) that are present in soy may affect the way cancer cells grow. These effects might be helpful, especially for men with prostate cancer. But there is also a chance that high doses of soy might act in the same way as estrogen, which can increase the growth of some cancers. Certain cancers, such as breast and endometrial cancer, are sensitive to estrogen and can grow when it is present. Women with breast and endometrial cancer should not take high doses of soy without first talking with their doctor. They should limit food sources of soy – such as soybeans, tofu, and soy milk – to no more than 3 servings per day.

How do I know if a treatment is safe and one that I should try?

Use only reliable sources of information, such as well-known and respected national organizations, prominent cancer treatment centers, or national government agencies. Beware of testimonials or information that comes only from those who are selling a product. Be sure to tell your doctor or nurse about any methods you wish to use, including vitamins, supplements, herbals, etc. so they may advise you about any benefit or interference with your cancer treatment. It is also best to remember that if it sounds too good to be true, it likely is not true.

Questions about foods

How do I select a diet that is right for me?

Start with the American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention. These guidelines form the basis for a healthy diet. They emphasize:

- vegetables and fruits
- legumes and whole grains
- lowfat or nonfat dairy products
- limited amounts of red meat (lean meats are preferred over processed meats and those high in fat).

If you have special dietary needs, as with diabetes, you will want to discuss your needs with a registered dietitian or your doctor.

How many servings of vegetables and fruits should I eat every day?

Everyone should eat at least five servings of vegetables and fruits each day. During cancer treatment it may be difficult to eat five servings per day, but with balanced meals, nutritious snacks, and juices, it is quite possible. Serving sizes are quite small, smaller than you might think:

- 1 medium piece of fruit
- ½ cup chopped, cooked or canned fruit
- ¼ cup of dried fruit
- 6 oz 100% fruit or vegetable juice
- 1 cup raw leafy vegetables
- ½ cup cooked or raw vegetables.

Can I get needed nutrients from fresh, frozen, and canned fruits and vegetables?

Yes. In fact, frozen foods are often more nutritious than fresh foods because they were usually picked ripe and quickly frozen. Canning can reduce some of the nutrients, but the nutritional value of canned fruits and vegetables is often the same as those that are fresh.

Should I be juicing my fruits and vegetables?

Juicing is not necessary, but juicing can add variety to the diet, and can be a good way to get your fruits and vegetables if you have trouble chewing or swallowing. Juicing also improves the absorption of some of the nutrients in fruits and vegetables in your body. If you buy juiced products, make sure that they have been pasteurized.

Should I be concerned about pesticides in my foods?

There is no evidence that the low levels of pesticide residues in fruits and vegetables affect cancer growth. Pesticides can be toxic, but only in very high doses. To reduce exposure to pesticides, thoroughly wash fruits and vegetables.

How do I avoid illnesses from foods that may contain germs?

Wash all foods thoroughly. Do not allow meats and dairy products to stay at room temperature. Cook all meats, poultry and seafood well. Do not drink un-pasteurized beverages.

How much water should I drink?

Unless your doctor suggests otherwise, you should try to drink at least 8 cups of liquid each day. This can include water, juice, or other liquids, such as broth, gelatin, etc. Many symptoms of fatigue, light-headedness, and nausea can be due to too little liquid in your body (called dehydration).

Should I avoid alcohol?

No more than 2 drinks per day for men, and 1 drink per day for women can help prevent heart disease. But these same levels increase the risk of cancer of the mouth, throat, larynx, esophagus, liver and breast. Although there is little information on alcohol and cancer recurrence, most experts recommend that survivors of these cancers avoid frequent use of alcohol.

Should I limit my caffeine intake?

Limiting caffeine will not affect your cancer, but it can help control many heart problems and help you sleep better.

Should I eat high fiber foods?

Yes. Fiber from whole grains and from high fiber cereals can improve bowel function and help to decrease the risk of heart disease. But so far, studies have not shown that fiber supplements reduce cancer risk. Fruits and vegetables are good choices, both for their fiber content and because they contain many other nutrients that reduce the risk of some chronic diseases, including some cancers. Beans are also high in protein and are good meat substitutes.

Should I reduce my fat intake?

It appears that the type of fat eaten, rather than the total amount eaten, may have more impact on chronic diseases like cancer and heart disease. During cancer treatment, adding moderate amounts of fat-containing foods can help to improve calorie intake. This is important if you were already underweight before you started treatment, or if you have side effects from treatment that make eating difficult. After treatment, you should eat a diet low in saturated fats (found in red meats and dairy products) and trans fatty acids (found in cookies and cakes). Instead, foods that contain monounsaturated and omega-3 fatty acids (such as fish, olive oil, walnuts and other nuts, seeds, and beans) are recommended as healthier sources of fats.

Should I avoid refined grains and sugar?

Refined grains and foods high in sugar (cakes, cookies, candies, etc.) can cause fatigue due to changes in blood sugar levels. It is wise to limit intake of refined sugars in favor of more nutritious foods. The main sources of carbohydrates in the diet should be whole grains, legumes, vegetables and fruits. When choosing grain products, look for those that list “whole grain” as the first ingredient on the label’s ingredient list.

Should I become a vegetarian?

You don’t need to stop eating meat after cancer, but eating less red meat (and less of other sources of saturated fats) can reduce your risk of heart disease, and may also reduce the risk for colon and prostate cancers. A vegetarian diet can be quite healthy if it is carefully planned. Diets including lean meats in small to moderate amounts can be healthy as well. If you choose a vegetarian diet, check with your doctor or a registered dietitian about whether you should take a multivitamin/mineral supplement.

Source: American Cancer Society, 2004